

Quick Strokes

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Bibliographic Notes — Ian Litterick in New Scientist, Qwertyuiop a dinosaur

What the writer of "Qwertyuiop — a dinosaur in a computer age" really wants is a one-hand keyboard for operators with two good hands to use. He argues that communication terminals of the future will be so much miniaturized that the keyboard will be the biggest part of them.

He has a point. Much keyboarding is done, right now, with one hand only, because the other hand is busy turning sheets of copy, often cards with only a few lines on them, or keeping track of the place in the copy that the eyes must come back to.

There is no way to transistorize, or in any way shrink, the human hand. There is furthermore no way to teach it to operate rapidly and well at an arrangement that was never calculated to correspond to its capabilities.

The Dvorak right and left one-hand keyboards were built to correspond, and they can be had on equipment of all kinds. Using one hand alone will not, however, shrink the keyboard. We need just as many characters as ever, and the conventional spacing between transverse rows (ranks) and between keys in a row seems to be close to the optimum.

The citation is New Scientist, 8 January, 1981, Vol. 89, No. 1235, pages 66-68.

Landmark presentation at a landmark conference at Ann Arbor

An abstract of Richard I. Land's presentation to a session of the May 20 to 22, 1981, Ann Arbor conference on Easier and More Productive Use of Computing Systems follows. Dick Land is a researcher for the Harvard University Engineering Sciences Laboratory who has lectured at other spots before that were much farther removed from Cambridge, on the topic of technological seeing.

Keyboard Entry — Can it be Simplified?

Yes, But there are problems. The present keyboard arrangement cannot be defended as comfortable, logically arranged, or optimized for human efficiency. Numerous alternative arrangements for alphanumeric entry have been designed, but none are supported by conclusive testing. Character sets used in different tasks can be expected to yield different optimal key locations. How universal can or should a solution be? In the absence of sufficient keyboard data, can the fingering of musical instruments and other traditional tasks suggest likely possibilities? The amateur keyboard user far outnumbers the professional. Computer entry and word processors are overtaking the simple typewriter as alphanumeric stroke entry devices. New tasks are introducing new characters and changing the frequency of selected old ones. Compromise and selection of one of the best available candidates compatible with present mechanical designs is advocated.

Sponsors of the conference are ACM Special Interest Group on the Social and Behavioral Science of Computing (SIGSOC) and Interuniversity Consortium for Political and Social Research (ICPSR). Gregory A. Marks, of the University of Michigan Institute for Social Research, chaired the conference for ICPSR. Ida M. Sanborn coordinated it.

Dvorak Selectric elements in stock

Speedy Keyboard Enterprises, Inc., Box 643, West Sacramento, CA 95691, has Dvorak Selectric elements in stock for prompt delivery. They fit Selectrics I and II. Please specify pica or elite. \$100 plus, in California, 6 per cent tax. Press-on keytop legends and a starting manual included.

The arrangement is strict Dvorak except for the exchange of locations of asterisk and underscore. Even impression is obtained by removing the vane link.

Modern, of Seaside, and Speedy, of Sacramento, show alternative arrangement to California business educators

On five of the keyboarded devices on display at the hands-on room at the CBEA state conference in Sacramento in April, the arrangement is close to that of the long-awaited American National standard alternate keyboard.

An almost steady trickle of members of the California Business Education Association kept four booth attendants so busy that they saw but little of the rest of the conference. Albert C. Kolb, teacher and merchant, of Seaside, had four different Smith-Corona models set up for the visitors to work out on. Phil Davis, an editor who also deals in equipment, had an IBM Selectric II, rented for the occasion, set up similarly.

Kolb manages a company registered as Modern Keyboards. Davis manages Speedy Keyboard Enterprises, Inc., of Sacramento. Both must be sought in the white pages under the managers' names.

Steve Driggs, a San Francisco journalist and user of the alternative arrangement, assisted at the Speedy Keyboard booth. Bradley Lessley, instructor in business and public administration at California State University Sacramento, stood in for several hours as a resource person for both exhibits.

The charts on bulletin boards facing all the guest operators at these tables showed the ASK arrangement of characters. The teachers seemed to agree readily that they could do a better job of imparting good spelling and good epistolary style if the mere mechanics of stroking the sought-for key could be taught faster.

The hands-on concept appears to have originated with Dwayne Schramm, of California State University Fresno, who was program chairman for the conference. Nobody wants to linger long at one booth at an exhibit, and the time is better spent stroking keys than listening to a spiel. The hands-on idea is now applied at local workshops under CBEA auspices.

Three manufacturers showed sophisticated equipment with only the naive conventional arrangement for the teachers to tap on.

The hands-on room was open most of Saturday, all day Sunday, and for two hours on Monday morning, from April 11 to 13, 1981.

Clerical productivity is Watson's theme at Imperial College, London, England

British specialists in management science gathered at Imperial College, London, on May 26, 1981, to hear Ronald Watson present his plan for an international keyboard productivity contest.

Imperial College is a graduate school and is alma mater to many top-flight experts in technical fields. John O. Jenkins is head of the management science department, sponsors of the Watson lecture.

In partnership with Virginia deGanahl Russell, of Brandon, Vermont, Watson is raising prize money to make it worth the while of the world's most terrific alphanumeric keyboard operators to perform at their peaks in a contest which is scheduled for Portland, Oregon, in 1982.

It was a contest that established the superiority of whole-hand keying over the two-finger input that had seemed so satisfactory before. The International Typewriting Tests in the years before World War II went far toward convincing the user public that a rearrangement of the characters on the keyboard would improve performance.

Noting the demand for skilled operators, the versatility of the sophisticated equipment, and the availability of training, Watson reasons that what is needed is a dramatization of the difference

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Clerical Productivity . . .

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between conventional and alternative keying, through a formal confrontation in the form of a series of contests.

Plans call for elimination contests to begin early enough for the first of the national contests to be held in April, 1982, presumably in Australia.

A distinguished committee has been set up in Australia under the chairmanship of Ray Warren, manager of the transcription branch of the Attorney General and Justice Department of the New South Wales government.

Watson is executive director of The International Word Productivity Contest No. 1, with mail address at Postoffice Box 1593, North Sydney NSW 2060, Australia. Virginia Russell, 11 Pearl St. Brandon, VT 05733, is his assistant. Both are affiliated with DIF (see the Barbara Blackburn story in this issue).

Word-processing executive reports interest in alternative keying high and rising in Ohio

By GAYLORD WHITNEY

I believe I have generated some very solid interest, here in Ohio, in the potential of the Dvorak keyboard. I have given brief presentations to the executive board of the Mid-Ohio Word Processing Association and to the Central Council on Office Automation. I have been lobbying for the common sense of better keyboards.

Several corporations have approached me saying they want to learn more, fast! A number of people have approached me already, "Volunteering" to take the training. I am quite excited about the possibilities here in Central Ohio.

I read recently in *Quick Strokes* about Barbara Blackburn and the demonstration she gave at the Minnesota Word Processing Association seminar. I would like to know if it would be possible to bring Ms. Blackburn or another worthy operator to Central Ohio for a demonstration. I believe the results would be dramatic, including the likelihood of numerous applications for membership in the Dvorak International.

We are planning a technology seminar which would be ideal for a Dvorak demonstration. Please advise me of the possibilities and the cost.

Since I'm heading up a "Keyboard Productivity Study Committee," I want to compile a library of appropriate information. If you could recommend a bibliography and forward any appropriate materials, I would be much obliged.

(Mr. Whitney is president of Whitney-Bolton and Associates, of Columbus, Ohio. W B & A offers information and word-processing services.)

Executive work stations—the right sites for sophisticated alternative arrangements

Vendors, get in there! The executive work station is on its way in — in the Northeastern United States first, in Central Europe also, in every business center eventually.

Present-day executives are people who, as students, stayed away from typing so as to keep their grade point averages at a high level. Now they are being asked to key their own drafts and memos.

The content and the legibility will be what counts. The executive's input is for storage and retrieval or for transmission to another terminal. If it is for publication, it will be put into proper form by an expert operator and read and approved before it is circulated.

Character selection on these terminals is electronic. The alternative arrangement can be supplied as readily as the conventional one. Why should an executive have anything less than the best on a machine for his or her own use?

So, vendors, your company provides the alternative — offer it! Let your prospect know that you are not behind the times!

Alternative-arrangement software for Tandy TRS-80 Model III is applied in Spokane

By STEVE JOHNSTON

Being able to write you a letter on my new TRS-80 Model III is something I've looked forward to for months; the necessary software, once projected for November of 1980, has arrived!

A Tandy programmer in Fort Worth has told me the next revision of the word-processing software (Scripsit) for the TRS-80 Model II will include an undocumented "patch" to access the Dvorak keyboard arrangement, which is a simple "subroutine" in the program. Quite a breakthrough!

(Johnston is senior computer marketing representative for the Radio Shack Computer Center in Spokane, Washington.)

Not only for professionals in experimental psychology

Below are references received in May, 1981, from Dick Land, of Harvard University Engineering Science Laboratory:

Fitts, Paul M., of Ohio State University, "The Information Capacity of the Human Motor System in Controlling the Amplitude of Movement", *Journal of Experimental Psychology* Vol 47:6, June 1954, pp 381-391.

Kvalseth, T. V., of Norway, "Quantitative Models of Motor Response Subject to Longitudinal, Lateral, and Preview Constraints", *Human Factors* Vol. 20:1, p 35 (extends Fitt's law).

A long step toward standard status

BSR X4.22-1981 is the current designation for the draft proposed alternative-arrangement standard. Virginia deGanahl Russell, of Brandon, Vermont, and Brad Lessley, of Sacramento, both affiliated with a general-interest organization, DIF, attended, as a delegation from the X4DSK working group, a joint meeting, in April, with the conventional-arrangement subcommittee, X3V1. The decision was to publish the same standard in two editions, with different designations and different diagrams.

L. G. Schear, affiliation Harris Corp., participated by telephone from Florida. The meeting was at the headquarters of the parent committee, now known as X3, at 1828 L St. NW, Washington, DC.

The X4DSK working group will meet once more, to resolve any negative ballots that may come in from members of the parent committee, X3. The forthcoming conventional standard will bear the number X4.23-1981 because the subcommittee that handled it began its work under the wing of the X4 committee while it was still separate from X3.

Pugilism and keyboard design—the difference—pugs don't fight to lose

The most naive gesture known to boxing is the unschooled fighter's first resort, namely, a straight right to opponent's chin. He ducks and hits you in the stomach, and you lose the fight.

Unschooled designers of alphanumeric keyboards have come up with two character assignments that are just as sure losers. These are e to the left forefinger in one proposed arrangement, and in another, e to the left thumb.

The mindlessness of a forefinger is wasted on a frequent character. It can reach in, or in and up, or in and down, all without disturbing the aim of any other finger for the next stroke. It can stroke twice as many keys as any other finger, and easily, provided that e, t, a, or o or n or s is not among them.

The alphabet is just as arbitrary an arrangement as old qwerty is, and yet some applications are reported applying that to a keyboard. There is no point at all to alphabetical arrangement unless it is rigorous, and if it is, it puts the e in an inboard upward reach location, assigned to the left forefinger. Absurd! In all sequences of c, d, and e, all of these frequently doubled, the left hand would work alone, with the constant risk of losing the orientation to home position and of an error on the next stroke.

Even worse is the assignment of the e to a thumb, the least competent of fingers, as in the Maltron arrangement.

Something free — write for it

The General Services Administration, Federal Property Resources Service, Washington DC 20406, publishes a green folder titled "Federal Surplus Personal Property Donation Programs". It is dated October, 1980. It gives many addresses where additional information may be secured. In general, however, nonprofit educational organizations are eligible for donations — not, of course, entirely without cost to the recipient organization.

Lloyd Burstein, of Vienna, Virginia, suggests that there may now be some discarded IBM Selectrics in GSA storage that could be converted to the alternative arrangement by rearranging the interposers and removing the vane link.

DIF and its branches please take notice and bear in mind that other organizations use typewriters also — or would if they had access to the wholly unintimidating alternative arrangement of characters on the keyboard.

Letter from a student

My typewriter has caused a fair amount of interest around the dorm but no one has had the nerve to borrow it. I'm working on it though.

I typed two term papers for a friend this last semester, and it's amazing the way my typing has improved on this arrangement, much better and considerably faster than qwerty!!

—LENORA WHITE, Fort Collins, Colorado

Bibliographic note

Courtesy of Leigh C. Safford, of Oswego, New York, we have the following citation:

Rosen, Steven, *Future Facts* (1976), pages 370 to 372, "Qwerty versus Aoeui", with diagram on page 371 showing the classic Dvorak arrangement. The author's predictions about economies in office work have been verified in practical applications of the Oregon Alternative arrangement. Quick Strokes would welcome any news of applications in printing.

From a teacher

On stationery of Dover High School, Dover, Ohio:

"The video tape on the Dvorak keyboard is being returned to you with my sincere appreciation. The tape was used during my presentation on the subject at the University of Akron, and I also showed it to my classes at the Dover High School. The other Business teachers made use of it here also. We all agree that we would love to see the use of Dvorak spread to this area to make it feasible to teach."

—LYNDA L. HAIDNICK

Blackburn in Oregon

"We had a real nice reception at the Word Processing Show. Lots and lots of people came up to examine the keyboard and most of them had heard about it. I didn't do too much typing, however — I did more talking than anything else. Steve made it around to about three quarters of the exhibitors and handed out literature. All in all, we made a real good showing," writes Barbara Blackburn.

Mrs. Blackburn has moved from her latest hometown as it appears in the *Guinness Book of World Records*, to Salem, Oregon, where she works as office manager for DIF, the federation of advocates of the alternative arrangement, and as secretary to Steve Anderson, attorney. The address of the Anderson and DIF offices is the same, 468 State St., Salem 97301.

LIMITED TIME—For 30 days—20% discount for cash with order on SCM ASK typewriters ordered from us. B. Adams, 4 Park Ave., Scarborough, ME 04074.

FOR RENT — Videotape, "Typewriters: Dvorak Made a Better One", narrated by Albert C. Kolb, Carmel (California) Middle School, time 14 minutes and 19 seconds. Narrator and secretary demonstrate an interesting and innovative alternative to the standard keyboard. Motivates student interest in the typewriter and in developing skills. Sony KCS 20. Per week, \$5. Shipping weight 1 lb., 12 ozs. Quick Strokes, Box 643, West Sacramento, CA 95691.



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TIME TO RENEW? This issue begins Vol. IX of Quick Strokes. Subs for Vol. IX, through March, 1982, are due. Single sub still \$5; double sub, to two addresses or both to one address, \$7.50; quintuple sub, to various addresses, \$10; bundle of 20, to one address, \$28. In California, please add 6% tax.

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